CONTENTS OF VOLUME 104

NUMBER 1

1 Stratal Thickness Frequencies and the Prevalence of Orderedness in Stratigraphic Sequences
Carl N. Drummond and Bruce H. Wilkinson

19 Mesozoic Magmatic and Tectonic Events within the Andean Plate Boundary Zone, 26°–27°30'S, North Chile: Constraints from $^{40}Ar/^{39}Ar$ Mineral Ages
R. David Dallmeyer, Michael Brown, John Grocott, Graeme K. Taylor, and Peter J. Treloar

41 Evolution of Natrocarbonatite from a Wollastonite Nephelinite Parent: Evidence from the June, 1993 Eruption of Oldoinyo Lengai, Tanzania
J. B. Dawson, D. M. Pyle, and H. Pinkerton

55 Basement Unconformity Control on Alteration, St. Francois Mountains, SE Missouri
Sally Sutton and J. Barry Maynard

71 Entrainment of Country Rock during Basaltic Eruptions of the Lucero Volcanic Field, New Mexico
Greg A. Valentine and Kristelle R. Groves

91 A History of the Continents in the Past Three Billion Years
John J. W. Rogers

Geological Notes

109 Abundance and Distribution of Diamonds in Eclogite Revealed by Volume Visualization of CT X-Ray Scans
Daniel J. Schulze, Diana Wiese, and John Steude

115 Comparison of Density-Stratified Cumulates: Effect on Trapped-Liquid Distributions
W. P. Meurer and A. E. Boudreau

121 Sailing Stones on Racetrack Playa
D. Bacon, T. Cahill, and T. A. Tombrello

127 *Reviews*

129 *Style Guidelines for Authors*

NUMBER 2

131 Paleomagnetic and $^{40}Ar/^{39}Ar$ Study of the Sinyai Dolerite, Kenya: Implications for Gondwana Assembly
Joseph G. Meert and Rob Van der Voo

143 Late Neogene Oceanographic Change along Florida's West Coast: Evidence and Mechanisms
Warren D. Allmon, Steven D. Emslie, Douglas S. Jones, and Gary S. Morgan

163 The Himalaya-Bengal Fan Denudation-Accumulation System during the Past 20 Ma
Gerhard Einsele, Lothar Ratschbacher, and Andreas Wetzel

185 U-Pb Monazite Geochronology of Granite Rocks from Maine: Implications for Late Paleozoic Tectonics in the Northern Appalachians
Paul B. Tomascak, Eirik J. Krogstad, and Richard J. Walker

197 The Nature and Timing of Deformation in the Beech Mountain Thrust Sheet between the Grandfather Mountain and Mountain City Windows in the Blue Ridge of Northwestern North Carolina
Mark G. Adams and Qi Su

Geological Notes

215 Syncontractional Crustal Anatexis and Deformation during Emplacement of ~1435 Ma Plutons, Western Needle Mountains, Colorado
David A. Gonzales, Karl E. Karlstrom, and Greg S. Siek

224 Wearing Down, Wearing Back, and Gorge Extension in the Long-Term Denudation of a Highland Mass: Quantitative Evidence from the Shoalhaven Catchment, Southeast Australia
Jonathan Nott, Robert Young, and Ian McDougall

233 Micro-Shock Deformation adjacent to the Surface of Shatter Cones from the Beaverhead Impact Structure, Montana
R. B. Hargraves and J. C. White

239 Discrimination of the Milton Belt and the Carolina Terrane in the Southern Appalachians: A Nd Isotopic Approach
Greg L. Wortman, Scott D. Samson, and James P. Hibbard

248 *Errata*

NUMBER 3

249 Spatially Averaged Long-Term Erosion Rates Measured from In Situ-Produced Cosmogenic Nuclides in Alluvial Sediment
Darryl E. Granger, James W. Kirchner, and Robert Finkel

259 Nd Isotopes and the Source of Sediments in the Miogeocline of the Canadian Cordillera
Nevine D. Boghossian, P. Jonathan Patchett, Gerald M. Ross, and George E. Gehrels

279 Assessing Differences in Composition between Low Metamorphic Grade Mudstones and High-Grade Schists Using Logratio Techniques
Alice A. Cardenas, Gary H. Girty, Andrew D. Hanson, Mary M. Lahren, Charles Knaack, and Diane Johnson

295 Petrology and Diagenesis of the Eocene Butano Sandstone, La Honda Basin, California
Salvatore Critelli and Tor H. Nilsen

317 Time-Averaging, Overcompleteness, and the Geological Record
Michał Kowalewski

327 Pliocene Cu-Au-Bearing Igneous Intrusions of the Gunung Bijih (Ertsberg) District, Irian Jaya, Indonesia: K-Ar Geochronology
Fred W. McDowell, Timothy P. McMahon, Paul Q. Warren, and Mark Cloos

Geological Notes

341 Oblique Terrane Assembly in the Late Paleoproterozoic, during the Labradorian-Gothian Orogeny in Southern Scandinavia
I. C. Starmer

351 Curved Tree Trunks—Indicators of Soil Creep and Other Phenomena
R. Ian Harker

359 Geochemistry of Late Ordovician Viola Limestone, Oklahoma: Implications for Marine Carbonate Mineralogy and Isotopic Compositions
G. Gao, S. I. Dworkin, L. S. Land, and R. D. Elmore

NUMBER 4

369 Heat Flow and the Chemical Composition of Continental Crust
S. M. McLennan and S. R. Taylor

379 Indian Intraplate and Continental Margin Rifting, Lithospheric Extension, and Mantle Upwelling in Deccan Flood Basalt Volcanism near the K/T Boundary: Evidence from Mafic Dike Swarms
S. Bhattacharji, N. Chatterjee, J. M. Wampler, P. N. Nayak, and S. S. Deshmukh

399 The Early Toarcian Anoxic Event in the Westernmost Tethys (Subbetic): Paleogeographic and Paleobiogeographic Significance
A. P. Jiménez, C. Jiménez de Cisneros, P. Rivas, and J. A. Vera

417 Ultrahigh-Pressure Metamorphism in the Śnieżnik Mountains (Sudetes, Poland): P-T Constraints and Geological Implications
Michael Bröcker and Reiner Klemd

435 Contrasting Thermal Evolution within the Ross Orogen, Antarctica: Evidence from Mineral $^{39}Ar/^{40}Ar$ Ages
John W. Goodge and R. David Dallmeyer

459 New Pb-Pb Single Zircon Age Constraints on the Timing of Neoproterozoic Glaciation and Continental Break-up in Namibia
Hartwig E. Frimmel, Urs S. Klötzli, and Pete R. Siegfried

471 Volumetric Analysis of a New England Barrier System Using Ground-Penetrating-Radar and Coring Techniques
Sytze van Heteren, Duncan M. FitzGerald, Donald C. Barber, Joseph T. Kelley, and Daniel F. Belknap

Geological Notes

485 Remnants of the Northern Sierra Nevada Paleozoic Island Arc in Western Nevada
Olivier Blein, Henriette Lapierre, Richard A. Schweickert, Patrick Monié, Henri Maluski, and Arnaud Pêcher

493 Ductile Shear as a Cause of Inverted Metamorphism: Example from the Nepal Himalaya
M. S. Hubbard

Discussion and Reply

501 A Middle Silurian–Early Devonian Magmatic Arc in the Qinling Mountains of Central China: A Discussion
Shuguang Li and Weidong Sun

504 A Middle Silurian–Early Devonian Magmatic Arc in the Qinling Mountains of Central China: A Reply
M. F. Lerch, F. Xue, A. Kröner, and W. Todt

506 The Diagenetic Role of Brittle Deformation in Compaction and Pressure Solution, Etjo Sandstone, Namibia: A Discussion
Russell J. Maharaj

508 The Diagenetic Role of Brittle Deformation in Compaction and Pressure Solution, Etjo Sandstone, Namibia: A Reply
Warren W. Dickinson and Kitty L. Milliken

NUMBER 5

509 Climatic and Morphologic Relationships of Rivers: Implications of Sea-Level Fluctuations on River Loads
Thierry Mulder and J. P. M. Syvitsky

525 Effects of Chemical Weathering and Sorting on the Petrogenesis of Siliciclastic Sediments, with Implications for Provenance Studies
H. W. Nesbitt, G. M. Young, S. M. McLennan, and R. R. Keays

543 Chemostratigraphic and Sequence Stratigraphic Constraints on Vendian-Cambrian Basin Dynamics, Northeast Siberian Craton
Shane M. Pelechaty, John P. Grotzinger, Vladimir A. Kashirtsev, and Vladimir P. Zhernovsky

565 Bedrock-Sculpturing by Tsunami, South Coast of New South Wales, Australia
E. A. Bryant and R. W. Young

583 Mesoproterozoic Metamorphism and $^{40}Ar/^{39}Ar$ Thermal History of the 1.4 Ga Priest Pluton, Manzano Mountains, New Mexico
Amy G. Thompson, Jeffrey A. Grambling, Karl E. Karlstrom, and R. D. Dallmeyer

599 Reequilibration of Ultramafic Xenoliths from Namibia by Metasomatic Processes at the Mantle Boundary
Leander Franz, Gerhard P. Brey, and Martin Okrusch

617 Thermobaric Structure of the Franciscan Complex in the Pacheco Pass Region, Diablo Range, California
M. Terabayashi, S. Maruyama, and J. G. Liou

NUMBER 6

637 Zircon and Whole Rock Nd-Pb Isotopic Evidence for a Grenville Age and a Laurentian Origin for the Basement of the Precordillera in Argentina
S. Mahlburg Kay, S. Orrell, and J. M. Abbruzzi

649 Elemental Distribution and Pyrite Occurrence in a Freshwater Peatland, Alberta
Catherine Chagué-Goff, Fariborz Goodarzi, and William S. Fyfe

665 Was the Deposition of Large Precambrian Iron Formations Linked to Major Marine Transgressions?
Bruce M. Simonson and Scott W. Hassler

677 Silurian Tectonics of Western Avalonia: Strain-Corrected Subsistence History of the Arisaig Group, Nova Scotia
John W. F. Waldron, J. B. Murphy, M. J. Melchin, and G. Davis

695 Evolution of an Archean Metamorphic Belt: A Conventional and SHRIMP U-Pb Study of Accessory Minerals from the Jimperding Metamorphic Belt, Yilgarn Craton, Western Australia
Delphine Bosch, Olivier Bruguier, and Robert T. Pidgeon

713 Archean High-Mg Quartz-Monzodiorite Plutonic Suite: A Re-evaluation of the Parental Magma and Differentiation
L. Paul Bédard

729 Debris-Fan Formation and Rapid Modification at Warm Springs Rapid, Yampa River, Colorado
Lauren Hammack and Ellen Wohl

Geological Notes

741 A Physical Model for the Rate of Coastal Tafoni Development
Tsuguo Sunamura

749 *Reviews*

751 *Index to Volume 104*

755 *Contents of Volume 104*